

## WE CLAIM:

1. A spinal and upper cervical impulse treatment device,  
comprising:

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(a) a stand having a vertically oriented arm an upper end  
of which is capable of being raised and lowered;

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(b) a horizontally oriented arm coupled to said vertically  
oriented arm and moveable in an axial direction  
relative to said vertically oriented arm, rotatable  
about its own axis, and pivotal about an axis of said  
vertically oriented arm; and

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(c) a spinal and upper cervical impulse treatment device  
coupled to a distal end of said horizontally extending  
arm and pivotal about an axis through its connection to  
said horizontally extending arm, said spinal and upper  
cervical impulse treatment device having a stylus  
extending from a lower end thereof and said spinal and  
upper cervical impulse treatment device operative to  
drive said probe in both a linear and rotational  
direction, a display means for inputting stylus  
alignment information and for displaying when the  
stylus is aligned with a patient.

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2. A spinal and upper cervical impulse treatment device according to claim 1, wherein said stylus is collapsible upon meeting resistance of a predetermined force value.
- 5 3. A spinal and upper cervical impulse treatment device according to claim 2, wherein said stylus has an inner sleeve slidable within an outer sleeve, said inner sleeve held in an extended position relative to said outer sleeve by biased friction couplings releasable upon application of a threshold  
10 force on said inner sleeve relative to said outer sleeve.
4. A spinal and upper cervical impulse treatment device according to claim 3, wherein said biased friction couplings include a plurality of ball bearings biased against indents in  
15 the wall of said stylus tube.
5. A spinal and upper cervical impulse treatment device according to claim 1, wherein said display is a touchscreen mounted on a top of said spinal and upper cervical impulse  
20 treatment device.
6. A spinal and upper cervical impulse treatment device according to claim 1, wherein said microprocessor is programmed to recognize correct alignment and to permit operation to  
25 commence only when proper alignment is achieved.

7. A spinal and upper cervical impulse treatment device according to claim 1, including a linear voice coil actuator mounted to said stylus and operative to transmit sinusoidal impulse waveforms along the stylus linear axis.

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8. A spinal and upper cervical impulse treatment device according to claim 1, including a second voice coil actuator mounted to said stylus and operative to transmit rotational sinusoidal impulse waveforms to said stylus.

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9. A spinal and upper cervical impulse treatment device according to claim 1, including an external computer coupled to said spinal and upper cervical impulse treatment device, said external computer for entering digitized data points relating to  
15 caliper measurements of aspects of the human body and transferring these data points from said external computer to said spinal and upper cervical impulse treatment device.

10. A spinal and upper cervical impulse treatment device,  
20 comprising:

(a) a stand having a vertically oriented arm an upper end of which is capable of being raised and lowered;

25 (b) a horizontally oriented arm coupled to said vertically oriented arm and moveable in an axial direction relative to said vertically oriented arm, rotatable about its own axis,

and pivotal about an axis of said vertically oriented arm;  
and

5 (c) a spinal and upper cervical impulse treatment device  
and controller coupled to a distal end of said horizontally  
extending arm and pivotal about an axis through its  
connection to said horizontally extending arm, said spinal  
and upper cervical impulse treatment device having a stylus  
extending from a lower end thereof and said spinal and upper  
10 cervical impulse treatment device operative to drive said  
probe in both a linear and rotational direction, a display  
means for inputting stylus alignment information and for  
displaying when the stylus is aligned with a patient.

15 11. A spinal and upper cervical impulse treatment device  
according to claim 10, wherein said stylus is collapsible upon  
meeting resistance of a predetermined force value.

20 12. A spinal and upper cervical impulse treatment device  
according to claim 10, wherein said stylus has an inner tube and  
an outer sleeve, said outer sleeve having a plurality of ball  
bearings biased against indents in the wall of said inner tube.

25 13. A spinal and upper cervical impulse treatment device  
according to claim 10, wherein said display is a touchscreen  
mounted on a top of said spinal and upper cervical impulse  
treatment device.

14. A spinal and upper cervical impulse treatment device according to claim 10, wherein said microprocessor is programmed to recognize correct alignment and to permit operation to commence only when proper alignment is achieved.

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15. A spinal and upper cervical impulse treatment device according to claim 10, including a linear voice coil actuator mounted to said stylus and operative to transmit sinusoidal impulse waveforms along the stylus linear axis.

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16. A spinal and upper cervical impulse treatment device according to claim 10, including a second voice coil actuator mounted to said stylus and operative to transmit rotational sinusoidal impulse waveforms to said stylus.

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17. A spinal and upper cervical impulse treatment device according to claim 10, including an external computer coupled to said spinal and upper cervical impulse treatment device, said external computer for entering digitized data points relating to  
20 caliper measurements of aspects of the human body and transferring these data points from said external computer to said spinal and upper cervical impulse treatment device.

18. A spinal and upper cervical impulse treatment device,  
25 comprising:

(a) a spinal and upper cervical impulse treatment device having a stylus extending out therefrom, said stylus operative to receive signals from a controller, mounted on said spinal and upper cervical impulse treatment device, when said stylus is in alignment with a patient causing said stylus to move both axially and rotationally, and a display on an exterior surface of said spinal and upper cervical impulse treatment device operative to receive signals from said controller and to display alignment, a transducer coupled to said stylus operative to impart linear and rotational movement to said stylus; and

(b) a stand supportable from a support surface and having a coupling end couplable to said impulse controller and display device with multiple degrees of freedom, enabling said impulse controller and display device to move in multiple directions so as to align said stylus with a patient on a bed proximate said impulse controller and display device.